IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: Adam R. Schran			
Conf. No.:	7133	Group Art Unit:	2157
Appln. No.:	10/078,815	Examiner:	Avi M. Gold
Filing Date:	February 19, 2002	Attorney Docket No.:	10397-3U1

Title: SYSTEM AND METHOD FOR DETERMINING NETWORK CONFIGURATION SETTINGS THAT PROVIDE OPTIMAL NETWORK PERFORMANCE

TRANSMITTAL OF APPEAL BRIEF
(37 C.F.R. § 41.37)

Transmitted herewith is the Appeal Brief in this application, with respect to the previously filed Notice of Appeal.

The item(s) checked below are appropriate:

[X]	Fee for filing Appeal Brief is enclosed.	
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Respectfully submitted,

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January 22, 2008 By: Clark Jablon
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APPEAL BRIEF (37 C.F.R. § 41.37)

This brief is in furtherance of the Notice of Appeal, filed on October 5, 2007 in this case.

The fees required under § 41.20 are dealt with in the accompanying "Transmittal of Appeal Brief."

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A. There is a clear error in the Examiner's outstanding rejection of independent claims 7 and 34 because the applied references do not disclose or suggest at least the limitations of step (d) "automatically conducting one or more performance tests using the selected network configuration settings <u>during the established network connection</u>," and step (e) "repeating steps (c) and (d) for one or more <u>other groups of network configuration settings during the established network connection</u>" 6

B. There is a clear error in the Examiner's Final Rejection of dependent claims 13 and 40 because Easty is non-analogous prior art, and thus cannot be properly combined with Rehkopf to provide the limitations of these claims 13

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I. REAL PARTY IN INTEREST

This application is assigned to Ascentive LLC by an Assignment recorded on February 19, 2002, at Reel No. 012626, Frame 0835 to Ascentive LLC. Accordingly, Ascentive LLC is the real party in interest.

II. RELATED APPEALS AND INTERFERENCES

Appellants, their Assignee and their legal representatives are unaware of the existence of any related appeals and/or interferences that will directly affect, be directly affected by, or have a bearing on the decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 2-27 and 29-56 are pending in the instant application on appeal.

Claims 2-27 and 29-56 stand twice rejected as discussed below and are the subject of the instant appeal.

The complete text of claims 2-27 and 29-56, as pending, is attached hereto in Appendix VIII.

IV. STATUS OF AMENDMENTS

No amendments were filed in the present application subsequent to the Final Rejection dated May 2, 2007 (hereafter, "the Final Rejection").

V. SUMMARY OF CLAIMED SUBJECT MATTER

The following summary describes one preferred embodiment of the present invention. The scope of the present invention is not limited to the specific configuration or elements shown in the figures and described below.

Independent claim 7 recites a method of optimizing network configuration settings for a user's client machine. The method operates as follows:

(a) A plurality of groups of network configuration settings are defined. (Fig. 4; page 9, lines 28-29).

(b) A network connection is established between the client machine and a remote server. (page 2, lines 22-24 and Fig. 1, elements 105, 115, 150)

(c) One of the groups of network configuration settings are selected for the client machine from the defined groups of settings. (steps 305 or 310 and step 315 of Fig. 3 and corresponding text on page 7, lines 2-6; Fig. 4 and corresponding text on page 9, lines 28-29)

(d) One or more performance tests are automatically conducted using the selected network configuration settings during the established network connection. (steps 305 or 310 and step 315 of Fig. 3 and corresponding page 7, lines 2-6; Fig. 4 and corresponding text on page 9, lines 28-29)

(e) Steps (c) and (d) are repeated for one or more other groups of network configuration settings during the established network connection. (steps 305 or 310 and step 315 of Fig. 3 and corresponding text on page 7, lines 2-6; Fig. 4 and corresponding text on page 9, lines 28-29)

(f) The network configuration settings of the client machine defined in the groups are automatically adjusted based on the results of the performance tests. The adjusted network configuration settings are settings that optimize the performance of the client machine. (steps 330, 335 and 340 of Fig. 3 and corresponding text on page 7, lines 15-26)

Independent claim 34 recites an article of manufacture for optimizing network configuration settings for a user's client machine. The article of manufacture comprises a computer-readable medium holding computer-executable instructions. (page 14, lines 21-26) The computer-executable instructions perform a method that operates as follows:

(a) A plurality of groups of network configuration settings are defined. (Fig. 4; page 9, lines 28-29).

(b) A network connection is established between the client machine and a remote server. (page 2, lines 22-24 and Fig. 1, elements 105, 115, 150)

(c) One of the groups of network configuration settings are selected for the client machine from the defined groups of settings. (steps 305 or 310 and step 315 of Fig. 3 and corresponding text on page 7, lines 2-6; Fig. 4 and corresponding text on page 9, lines 28-29)

(d) One or more performance tests are automatically conducted using the selected network configuration settings during the established network connection. (steps 305 or 310 and step 315 of Fig. 3 and corresponding page 7, lines 2-6; Fig. 4 and corresponding text on page 9, lines 28-29)

(e) Steps (c) and (d) are repeated for one or more other groups of network configuration settings during the established network connection. (steps 305 or 310 and step 315 of Fig. 3 and corresponding text on page 7, lines 2-6; Fig. 4 and corresponding text on page 9, lines 28-29)

(f) The network configuration settings of the client machine defined in the groups are automatically adjusted based on the results of the performance tests. The adjusted network configuration settings are settings that optimize the performance of the client machine. (steps 330, 335 and 340 of Fig. 3 and corresponding text on page 7, lines 15-26)

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 2-3, 5-12, 14, 18, 23, 26, 27, 29-30, 32-39, 41, 45, 50, 53-56 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rehkopf in view of Tate.

Claims 4, 15-17, 19-22, 24, 25, 31, 42-44, 46-49, 51 and 52 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rehkopf in view of Tate and "Official Notice."

Claims 13 and 40 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Rehkopf in view of Tate and further in view of Easty et al.

VIID. ARGUMENTS – REJECTIONS UNDER 35 U.S.C. § 103

A. There is a clear error in the Examiner's outstanding rejection of independent claims 7 and 34 because the applied references do not disclose or suggest at least the limitations of step (d) "automatically conducting one or more performance tests using the selected network configuration settings during the established network connection," and step (e) "repeating steps (c) and (d) for one or more other groups of network configuration settings during the established network connection"

1. Rehkopf

Rehkopf discloses a method for benchmarking and optimizing end-to-end processing performance of a computer network system. The method operates as follows:

a. System performance variables are selected.

b. A baseline performance test is run using an initial set of values for the system performance variables to produce a benchmark system performance.

c. The system performance variables are fixed at the initial set of values.

d. A floating variable is selected from among the system performance variables.

e. Subsequent tests are run with the floating variable set to different values, and system performance indicators that result from each subsequent test are recorded. The system performance indicators are compared to the benchmark system performance. An optimal value of the floating variable is then recorded that optimizes the system performance indicators.

f. Another floating variable is then selected from among remaining system performance variables that have not yet been selected to be the floating variable.

g. Steps (e) and (f) are repeated until all of the system performance variables have been selected as the floating variable.

h. Each of the system performance variables are then fixed to its optimal value.

Rehkopf's method can be characterized as a "brute force" method in that each system performance variable is individually tested while keeping the other system performance variables constant. (The system performance variable being tested during each iteration is the "floating variable.")

Rehkopf's method has at least the following disadvantages:

a. The test process may take a long amount of time because each system performance variable must be individually tested throughout its entire potential range of values. If there are a large number of system performance variables, the test time may be extremely long.

b. After each system performance variable is individually tested, its "optimal value" is determined only in view of the <u>initial values</u> of the other system performance variables (which remain fixed at their initial values during the testing). However, it is very common that certain system performance variables affect other system performance variables. Thus, each system performance variable may actually have a better (i.e., more optimal) value if one or more of the other system performance variables were set to a value <u>other than their initial values</u>. Rehkopf's method has no process for determining the best <u>set</u> of system performance variables.

c. No prior knowledge of previously determined optimal system performance variables is used in Rehkopf. Such knowledge could potentially speed up the testing process by reducing or eliminating the number of system performance variables that would need to be tested, or by reducing the range of values to be tested for the current floating variable.

If the initial set of values (or a subset of the initial set of values) is considered to be equivalent to the claimed group of network configuration settings, at best, Rehkopf discloses defining only <u>one</u> group of network configuration settings. Rehkopf always reverts back to the <u>same</u> initial set of values (i.e., the same group of network configuration settings) every time that the floating variable is changed. Thus, the concept of <u>defining</u> a <u>plurality</u> of groups of network configuration settings and conducting performance tests on the different groups of defined network configuration settings is completely absent from Rehkopf.

2. <u>Tate</u>

In the Final Rejection, the Examiner concedes that Rehkopf does <u>not</u> disclose defining a <u>plurality</u> of groups of network configuration settings. The Examiner relies upon column 7, lines 30-41 and column 11, lines 28-35 of Tate for disclosing the use of multiple network configuration settings, specified in advance and stored in groups. Column 7, lines 30-52 of Tate reads as follows (underlining added for emphasis):

> The present invention enables a user or a user's network administrator to create multiple mobile configurations. A mobile configuration is a set of the preferred settings of all communication-related system parameters for a given network and/or location that can be specified in advance. These preferred settings are categorized and stored in profiles. <u>A user, upon arrival in a particular physical or logical "location" (e.g. hotel, branch office, airport lounge or a different network environment) may execute the mobile configuration manager application of the present invention to examine the list of existing and available mobile configurations.</u>

> FIG. 2 depicts a plurality of mobile configurations 32, 34, and 36 representative of a first WAN, a LAN and a second WAN configuration, respectively. In the present invention, a mobile configuration manager application 30 enables a user to create a mobile configuration or to select between previously created mobile configurations. When selecting a particular mobile configuration, a user may choose to "activate" a particular mobile configuration, i.e., instruct the mobile configuration manager 30 to change all system parameters to the values stored in that particular mobile configuration <u>in order to facilitate the desired connection</u>.

Although Tate discloses groups of network configuration settings (column 11, lines 28-35), the purpose of such configurations (also, referred to as "network configuration profiles") is to allow a user to manually select one configuration profile before establishing a desired connection. That is, a user selects one configuration profile from among the previously created configuration profiles and then uses that configuration profile for the connection session. See, also the following text in claim 1 (column 15, lines 46-58) of Tate that further confirms how Tate operates (underlining and italics added for emphasis):

> storing at least one network configuration profile inputted via the user interface dialog into a data storage location;
>
> configuring the communications device in accordance with the contents of the data storage location, whereby the communications device is thereafter enabled to communicate via the communications network; and
>
> automatically calculating a dialing parameter based upon the contents of the location profile and the dial-up network profile, <u>the dialing parameter ***thereafter*** being used to establish a connection</u> between the communications device and the remote network node via the WAN communications network

In Tate, the user must know which configuration profile is appropriate based on the type of connection to be made (e.g., dial-up, LAN). The user then selects the appropriate configuration profile and then establishes a connection. Thus, the configuration profile is selected <u>before</u> a connection is established.

Nowhere does Tate disclose or suggest automatically conducting performance tests using different configuration profiles or selecting the configuration profile <u>during an established connection</u>. Nor does Tate disclose or suggest selecting the configuration profile <u>during</u> an established connection.

3. Rehkopf in view of Tate

If the disclosure in Tate was used in Rehkopf as suggested by the Examiner (that is, by modifying Rehkopf to define a plurality of groups of network configuration settings), at best, Rehkopf would initially select one particular group of network configuration settings from a plurality of previously stored network configuration settings before a connection is established, and then after the connection is established, the settings within the selected group would be modified one at a time as disclosed in Rehkopf for performance testing.

Stated another way, at best, all that Tate suggests is that the group of network configuration settings in Rehkopf could be initially selected from a group of different network configuration settings before a connection is established. However, once a connection is established, there would be no further use for the unselected group of network configuration settings.

In contrast to Tate, the presently claimed invention uses different groups of network configuration settings during the established connection so as to identify the optimum group of network configuration settings. Neither Tate nor Rehkopf discloses conducting performance tests on different groups of network configuration settings during an established connection, and thus the combination of Rehkopf and Tate would also lack this claimed functionality.

4. Patentability of independent claims 7 and 34 over Rehkopf in view of Tate

Amended claim 7 reads as follows (underlining added for emphasis):

7. A method of optimizing network configuration settings for a user's client machine, the method comprising:
(a) defining a plurality of groups of network configuration settings;
(b) establishing a network connection between the client machine and a remote server;
(c) selecting one of the groups of network configuration settings for the client machine from the defined groups of settings;
(d) automatically conducting one or more performance tests using the selected network configuration settings during the established network connection;
(e) repeating steps (c) and (d) for one or more other groups of network configuration settings during the established network connection; and
(f) automatically adjusting the network configuration settings of the client machine defined in the groups based on the results of the performance

tests, wherein the adjusted network configuration settings are settings that optimize the performance of the client machine.

As discussed above, even if Rehkopf was modified as suggested by the Examiner, the resultant modified Rehkopf would still lack at least the above-highlighted limitations in steps (d) and (e).

Furthermore, a base reference cannot be modified if doing so would destroy its intended manner of operation. MPEP 2143.01. The Examiner's proposed modification to Rehkopf would clearly destroy Rehkopf's intended manner of operation and thus is improper. Specifically, the Examiner's proposed modification to Rehkopf would require eliminating Rehkopf's initial set of values and different floating variables, and replacing it with different groups of network configuration settings. Rehkopf's invention concept is summarized in the Abstract which reads as follows (underlining added for emphasis)

> A method for benchmarking and optimizing the end-to-end processing performance of a computer network system that identifies performance variables that affect system performance, runs an initial performance test to establish a baseline value for each performance variable and a baseline performance value for the system, <u>pins all performance variables to their constant baseline values except for one floating variable, incrementally changes the value of the floating variable, conducts a new performance test for each changed value, records the values of the system performance and the associated performance variables in a matrix, restores the floating variable to its baseline value, and repeats the prior steps for a new floating variable. The method proceeds until all performance variables have been tested as the floating variable and the matrix is complete.</u> Using the matrix, a computer system designer can understand the performance variables that most affect system performance and can optimize hardware and software configurations.

This invention concept, including the concept of a "floating variable," is repeated throughout the entire disclosure and claims in Rehkopf. While it theoretically might be possible to use different groups of network configuration settings <u>and</u> maintain the floating variable concept in Rehkopf, there is no suggestion in either of the applied references regarding how this would be done. Furthermore, such a modification would clearly be an improper hindsight reconstruction of Appellants' invention.

To summarize, Appellants are not asserting that Rehkopf cannot be modified based on disclosures in Tate. Instead, Appellants are asserting that the modifications suggested by Tate

would not lead to Appellants' claimed invention. The following table summarizes Appellants' arguments set forth above.

Reference	Before established connection	During established connection
Rehkopf	Select initial set of values for the system performance variables	Run multiple tests with an initial set of values and different floating variables as described above (no groups of network configuration settings or anything equivalent thereto)
Tate	Select a network configuration setting to be used for the connection to be established from a plurality of groups of network configuration settings.	Use network configuration settings in the previously selected group. No performance tests are run. No changes are made to any of the network configuration settings during the connection.
Rehkopf + Tate	Rehkopf could be modified so as to select the initial set of values based on a plurality of different groups of values	Improper combination because there would be no "floating variable" in Rehkopf.

In sections 5-9 on pages 10-12 of the Final Rejection, the Examiner responded to the arguments above. However, none of the Examiner's responses refute the arguments. The responses are addressed as follows in accordance with their respectively numbered paragraphs in the Final Rejection:

6. The Examiner's analysis of the applied references was based on the combination of the references as applied by the Examiner, particularly, the manner in which the Examiner modified Rehkopf based on the disclosures in Tate. Appellants did not attack the references individually. Thus, the Examiner's citation of well-established case law that such an attack on the applied references is improper is not relevant to this matter.

7. Appellants did not argue that Rehkopf and Tate are "nonanalogous art." Again, see the first full paragraph on page 17 of the 3/28/07 Amendment where Appellants implicitly state that no such argument is being made.

8. Appellants argued that Rehkopf and Easty are non-analogous art in traversing the rejection of dependent claims 13 and 40. This argument is discussed in further detail below.

However, this argument has nothing to do with the rejection of independent claims 7 and 34, which was not based on Easty.

9. The Examiner has correctly identified the case law principles regarding hindsight as discussed in MPEP 2145, Section X. Part A. However, Appellants' argument is that the modifications to Rehkopf were made solely based on knowledge gleaned only from applicant's disclosure, and not knowledge gleaned from Tate. The rejection is thus a textbook example of improper hindsight reconstruction of Appellants' invention. Stated another way, the Examiner did not merely use knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made to modify Rehkopf. Use of such knowledge is entirely permissible for hindsight reconstruction of the claimed invention. Specifically, as discussed on pages 16-17 of the 3/28/07 Amendment,

> Furthermore, a base reference cannot be modified if doing so would destroy its intended manner of operation. MPEP 2143.01. The Examiner's proposed modification to Rehkopf would clearly destroy Rehkopf's intended manner of operation and thus is improper. Specifically, the Examiner's proposed modification to Rehkopf would require eliminating Rehkopf's initial set of values and different floating variables, and replacing it with different groups of network configuration settings. Rehkopf's invention concept is summarized in the Abstract which reads as follows...This invention concept, including the concept of a "floating variable," is repeated throughout the entire disclosure and claims in Rehkopf. While it theoretically might be possible to use different groups of network configuration settings and maintain the floating variable concept in Rehkopf, ***there is no suggestion in either of the applied references regarding how this would be done***. Furthermore, such a modification would clearly be an improper hindsight reconstruction of Applicants' invention. (underlining in the original, bolded and italicizing added for emphasis)

In sum, the Examiner used the claimed invention as a roadmap to modify Rehkopf in a manner that was nowhere disclosed or suggested by the prior art of record.

Regarding the arguments to claims 7 and 34, the Examiner asserts that column 2, line 21 through column 3, line 11 of Rehkopf discloses conducting performance tests during the established network connection. Here, the Examiner misconstrued Appellants' argument presented in section 3 above. The performance tests that are run by Rehkopf during an established network connection are not run using a plurality of groups of network configuration settings, as required by claims 7 and 34. To the contrary, Rehkopf's floating variable and fixed

other system performance variables teaches away from this claim limitation. Likewise, modifying Rehkopf in view of Tate would also not lead to a system that would meet this claim limitation for at least the reasons given in section 3 above.

In sum, the Examiner has failed to rebut Appellants' explanation of why the above-highlighted limitations in claims 7 and 34 are not disclosed or suggested by the applied references.

For at least the reasons set forth above, claim 7 is believed to be patentable over Rehkopf in view of Tate. Claim 34 is believed to be patentable over Rehkopf in view of Tate for the same reasons as claim 7.

B. There is a clear error in the Examiner's Final Rejection of dependent claims 13 and 40 because Easty is non-analogous prior art, and thus cannot be properly combined with Rehkopf to provide the limitations of these claims

Easty relates to aggregating past content selections of users so as to configure an endpoint server with content that is most likely to be requested. The scheme in Easty operates as follows:

a. Information received from users are analyzed to generate an "aggregate profile of the endpoint server." The "aggregate profile of the endpoint server" represents the collective characteristics and preferences of a plurality of users served by the endpoint server. For example, the preferences may be defined by the frequency that a particular content item or type of content is requested (column 3, lines 2-4).

b. The central server selects a subset of master contents stored in a central database based on an analysis of the aggregate profile of the endpoint server.

c. The selected subset of the master contents is stored in the endpoint database for distribution to the users.

Using aggregation concepts for content selection queuing is a completely different and non-analogous concept than using aggregation concepts for selecting network configuration settings. That is, Easty is directed to content selection, whereas the present invention is directed to network configuration setting selection. Easty is not directed to the same problem in the art addressed by the present invention, nor is Easty in the same field of endeavor as the present invention. Easty is thus non-analogous prior art and therefore cannot be combined with Rehkopf to provide the missing limitations in Rehkopf related to aggregate test results and the use of such results to receive recommendations for network configuration settings.

Claims 13 and 40 further recite that a remote server stores network configuration settings and aggregates test results associated with other client machines that previously established a network connection with the remote server, and that a user's client machine receives network configuration setting recommendations from the remote server, based on the network configuration settings and the aggregate test results stored on the remote server. No such limitation is even remotely disclosed or suggested in Rehkopf.

In the outstanding Office Action, the Examiner admits that Rehkopf lacks these limitations and relies upon Easty for such limitations. However, as discussed above, Easty is directed to a completely different invention, and is non-analogous prior art, and thus cannot be combined with Rehkopf to make up for the deficiencies in Rehkopf.

In section 8 on page 11 of the Final Rejection, the Examiner responded that Rehkopf and Easty are analogous prior art because both relate to "data transferred over a network." While the Examiner has properly identified the well-known test for "analogous art," the Examiner's explanation that both relate to "data transferred over a network" is an overly broad characterization of the references that bears no relationship to the claim limitation that led the Examiner to rely upon Easty. Millions of prior art references relate to "data transferred over a network." However, having this fact in common does not provide sufficient motivation to identify all such references as being analogous art for purposes of combining such references to meet any limitations in a claim, including limitations that do not relate to network data communications. The Examiner's reasoning is no different in nature than arguing that all references that have "computers" or "memory" in them are analogous art, and thus are properly combinable to meet claim limitations that have nothing to do with computers or memory.

C. There is a clear error in the Examiner's Final Rejection of the remaining dependent claims.

The remaining dependent claims are believed to be allowable because they depend upon respective allowable independent claims, and because they recite additional patentable steps.

D. Conclusion

For the reasons set forth above, Appellants respectfully submit that pending claims 2-27 and 29-56 are patentable over the prior art applied by the Examiner. Reversal of the rejections and issuance of a Notice of Allowance are respectfully requested at the earliest opportunity.

VIII. APPENDIX OF CLAIMS

1. (Canceled)

2. The method of claim 7 wherein the adjustments of the network configuration settings are made through the use of an algorithm that performs statistical analysis on past network configuration setting performance test result data.

3. The method of claim 2 wherein regression is used to perform the statistical analysis.

4. The method of claim 2 wherein a polynomial curve fit is used to perform the statistical analysis.

5. The method of claim 2 wherein the statistical analysis is performed by the client machine.

6. The method of claim 2 wherein the statistical analysis is performed by the remote server.

7. A method of optimizing network configuration settings for a user's client machine, the method comprising:

(a) defining a plurality of groups of network configuration settings;

(b) establishing a network connection between the client machine and a remote server;

(c) selecting one of the groups of network configuration settings for the client machine from the defined groups of settings;

(d) automatically conducting one or more performance tests using the selected network configuration settings during the established network connection;

(e) repeating steps (c) and (d) for one or more other groups of network configuration settings during the established network connection; and

(f) automatically adjusting the network configuration settings of the client machine defined in the groups based on the results of the performance tests, wherein the adjusted network configuration settings are settings that optimize the performance of the client machine.

8. The method of claim 7 further comprising:

(g) the user specifying, via the client machine, at least one network performance preference; and

(h) executing performance metric scoring on each of the different defined groups of network configuration settings, based on a relative weight assigned to the network performance preference.

9. The method of claim 7 wherein logic running on the remote server statistically analyzes the results of the performance tests and determines one or more groups of network configuration settings for use on the client machine.

10. The method of claim 9 wherein the logic includes an intelligent optimization algorithm which uses historical performance data to statistically assess positive or negative scoring variations when a particular network configuration setting is adjusted.

11. The method of claim 7 wherein the adjustments of the network configuration settings are made through the use of an algorithm that determines future groups of network configuration settings to test.

12. The method of claim 7 further comprising:

(g) continually monitoring the network configuration performance of the client machine, after step (f) has been performed; and

(h) automatically adjusting the monitored network configuration settings of the client machine to maintain optimal network performance of the client machine.

13. The method of claim 7 further comprising:

(g) storing on the remote server, groups of network configuration settings and aggregate test results associated with other client machines that previously established a network connection with the remote server; and

(h) the user's client machine receiving groups of network configuration setting recommendations from the remote server based on the groups of network configuration settings and the aggregate test results stored on the remote server.

14. The method of claim 7 wherein one of the network configuration settings is latency.

15. The method of claim 7 wherein one of the network configuration settings is ping time.

16. The method of claim 7 wherein one of the network configuration settings is network connection stability.

17. The method of claim 7 wherein one of the network configuration settings is Maximum Transmission Unit (MTU).

18. The method of claim 7 wherein one of the network configuration settings is Maximum Segment Size (MSS).

19. The method of claim 7 wherein one of the network configuration settings is Receive Window (RWIN).

20. The method of claim 7 wherein one of the network configuration settings is Time To Live (TTL).

21. The method of claim 7 wherein one of the network configuration settings is Black Hole Detection.

22. The method of claim 7 wherein one of the network configuration settings is Auto Discovery of Path Maximum Transmission Unit (MTU).

23. The method of claim 7 wherein one of the network configuration settings is packet size.

24. The method of claim 7 wherein one of the network configuration settings is upload throughput speed.

25. The method of claim 7 wherein one of the network configuration settings is download throughput speed.

26. The method of claim 7 further comprising:

(g) assigning a percentage score to each applicable network configuration setting;

(h) multiplying the relative weight of each network configuration setting by the percentage score for the network configuration setting, wherein the relative weight is determined as a function of the user's network performance preferences; and

(i) adding the resulting products of step (h) to determine a weighted overall percentage score.

27. The method of claim 7 wherein step (c) further comprises:

(c)(i) the user selecting a group of default network configuration settings.

28. (Canceled)

29. The article of manufacture of claim 34 wherein the adjustments of the network configuration settings are made through the use of an algorithm that performs statistical analysis on past network configuration setting performance test result data.

30. The article of manufacture of claim 29 wherein regression is used to perform the statistical analysis.

31. The article of manufacture of claim 29 wherein a polynomial curve fit is used to perform the statistical analysis.

32. The article of manufacture of claim 29 wherein the statistical analysis is performed by the client machine.

33. The article of manufacture of claim 29 wherein the statistical analysis is performed by the remote server.

34. An article of manufacture for optimizing network configuration settings for a user's client machine, the article of manufacture comprising a computer-readable medium holding computer-executable instructions for performing a method comprising:

(a) defining a plurality of groups of network configuration settings;

(b) establishing a network connection between the client machine and a remote server;

(c) selecting one of the groups of network configuration settings for the client machine from the defined groups of settings;

(d) automatically conducting one or more performance tests using the selected network configuration settings during the established network connection;

(e) repeating steps (c) and (d) for one or more other groups of network configuration settings during the established network connection; and

(f) automatically adjusting the network configuration settings of the client machine defined in the groups based on the results of the performance tests, wherein the adjusted network configuration settings are settings that optimize the performance of the client machine.

35. The article of manufacture of claim 34 wherein the computer-executable instructions perform a method further comprising:

(e) the user specifying, via the client machine, at least one network performance preference; and

(f) executing performance metric scoring on each of the different defined groups of network configuration settings, based on a relative weight assigned to the network performance preference.

36. The article of manufacture of claim 34 wherein logic running on the remote server statistically analyzes the results of the performance tests and determines one or more groups of network configuration settings for use on the client machine.

37. The article of manufacture of claim 36 wherein the logic includes an intelligent optimization algorithm which uses historical performance data to statistically assess positive or negative scoring variations when a particular network configuration setting is adjusted.

38. The article of manufacture of claim 34 wherein the adjustments of the network configuration settings are made through the use of an algorithm that determines future groups of network configuration settings to test.

39. The article of manufacture of claim 34 wherein the computer-executable instructions perform a method further comprising:

(g) continually monitoring the network configuration performance of the client machine, after step (f) has been performed; and

(h) automatically adjusting the monitored network configuration settings of the client machine to maintain optimal network performance of the client machine.

40. The article of manufacture of claim 34 wherein the computer executable instructions perform a method further comprising:

(g) storing on the remote server, groups of network configuration settings and aggregate test results associated with other client machines that previously established a network connection with the remote server; and

(h) the user's client machine receiving groups of network configuration setting recommendations from the remote server based on the groups of network configuration settings and the aggregate test results stored on the remote server.

41. The article of manufacture of claim 34 wherein one of the network configuration settings is latency.

42. The article of manufacture of claim 34 wherein one of the network configuration settings is ping time.

43. The article of manufacture of claim 34 wherein one of the network configuration settings is network connection stability.

44. The article of manufacture of claim 34 wherein one of the network configuration settings is Maximum Transmission Unit (MTU).

45. The article of manufacture of claim 34 wherein one of the network configuration settings is Maximum Segment Size (MSS).

46. The article of manufacture of claim 34 wherein one of the network configuration settings is Receive Window (RWIN).

47. The article of manufacture of claim 34 wherein one of the network configuration settings is Time To Live (TTL).

48. The article of manufacture of claim 34 wherein one of the network configuration settings is Black Hole Detection.

49. The article of manufacture of claim 34 wherein one of the network configuration settings is Auto Discovery of Path Maximum Transmission Unit (MTU).

50. The article of manufacture of claim 34 wherein one of the network configuration settings is packet size.

51. The article of manufacture of claim 34 wherein one of the network configuration settings is upload throughput speed.

52. The article of manufacture of claim 34 wherein one of the network configuration settings is download throughput speed.

53. The article of manufacture of claim 34 wherein the computer-executable instructions perform a method further comprising:

(g) assigning a percentage score to each applicable network configuration setting;

(h) multiplying the relative weight of each network configuration setting by the percentage score for the network configuration setting, wherein the relative weight is determined as a function of the user's network performance preferences; and

(i) adding the resulting products of step (h) to determine a weighted overall percentage score.

54. The article of manufacture of claim 34 wherein step (c) further comprises:

(c)(i) the user selecting a group of default network configuration settings.

55. The method of claim 7 further comprising:

(g) storing the plurality of groups of network configuration settings in a storage location, wherein step (c) further comprises selecting one of the groups of network configuration settings for the client machine from the storage location.

56. The article of manufacture of claim 34 wherein the computer-executable instructions perform a method further comprising:

(g) storing the plurality of groups of network configuration settings in a storage location, wherein step (c) further comprises selecting one of the groups of network configuration settings for the client machine from the storage location.

IX. APPENDIX OF EVIDENCE

None.

X. APPENDIX OF RELATED DECISIONS

None.

XI. OTHER MATERIAL THAT APPELLANT CONSIDERS NECESSARY OR DESIRABLE

None.

Respectfully submitted,

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